

What is claimed is:

1. An electric vehicle comprising a motor which is to drive wheels of said vehicle, said motor comprising:

a rotor having an axis of rotation, and also having a first interior permanent magnet including at least two magnet pieces separated from one another in a direction of the axis of rotation by an electrical insulator; and

a stator having teeth wound by concentrated windings.

2. The electric vehicle according to claim 1, wherein said electrical insulator comprises epoxy resin.

3. The electric vehicle according to claim 1, wherein said motor further comprises at least one other interior permanent magnet circumferentially spaced from said first interior permanent magnet and including at least two magnet pieces separated from one another by an electrical insulator, with each of said interior permanent magnets having an N pole and an S pole, wherein said first interior permanent magnet has its N pole facing said stator and each circumferentially adjacent said at least one other interior magnet has its S pole facing said stator.

4. The electric vehicle according to claim 3, wherein said epoxy resin has a thickness of at least 0.03 mm.

5. The electric vehicle according to claim 2, wherein said epoxy resin has a thickness of at least 0.03 mm.

6. The electric vehicle according to claim 1, wherein said electrical insulator has a thickness of at least 0.03 mm.

7. The electric vehicle according to claim 1, wherein said interior permanent magnet comprises a sintered magnet.

8. The electric vehicle according to claim 7, wherein said electrical insulator comprises epoxy resin.

9. The electric vehicle according to claim 8, wherein said motor further comprises at least one other comprising at least one other interior permanent magnet circumferentially spaced from said first interior permanent magnet and including at least two magnet pieces separated from one another by an electrical insulator, with each of said interior permanent magnets having an N pole and an S pole, wherein said first interior permanent magnet has its N pole facing said stator and each circumferentially adjacent said at least one other interior magnet has its S pole facing said stator.

10. The electric vehicle according to claim 9, wherein said epoxy resin has a thickness of at least 0.03 mm.

11. The electric vehicle according to claim 8, wherein said epoxy resin has a thickness of at least 0.03 mm.

12. The electric vehicle according to claim 1, further comprising a driving apparatus for driving said motor, and a battery for powering said motor.

13. The electric vehicle according to claim 12, wherein said electrical insulator comprises epoxy resin.

14. The electric vehicle according to claim 13, wherein said motor further comprises at least one other interior permanent magnet circumferentially spaced from said first interior permanent magnet and including at least two magnet pieces separated from one another by an electrical insulator, with each of said interior permanent magnets having an N pole and an S pole, wherein said first interior permanent magnet has its N pole facing said stator and each circumferentially adjacent said at least one other interior magnet has its S pole facing said stator.

15. The electric vehicle according to claim 14, wherein said epoxy resin has a thickness of at least 0.03 mm.

16. The electric vehicle according to claim 13, wherein said epoxy resin has a thickness of at least 0.03 mm.

17. The electric vehicle according to claim 1, wherein said electrical insulator comprises an air gap.

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